

REMARKS

I. Summary of the Office Action

Claims 1-21 are pending in this application.

The drawings are objected to under 37 C.F.R. § 1.83(a) for not showing every feature of the invention specified in the claims.

Claims 1-5, 8-10, 12-14, 16, 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being obvious from Sansbury U.S. Patent No. 5,959,891 (hereinafter "Sansbury") in view of Rose et al. U.S. Patent No. 5,471,421 (hereinafter "Rose").

Claims 6, 7, 17 and 19 are rejected under 35 U.S.C. 103(a) as being obvious from Sansbury in view of Rose in further view of Lee U.S. Patent No. 6,353,551.

II. Summary of Applicants' Reply

Applicants have amended the drawings to show certain features of the invention specified in the claims. Applicants have amended the specification to mention reference numerals shown in the amended drawings and to correct a typographical error. Claim 9 has been amended to more particularly define the invention. No new matter has been introduced as a result of these amendments.

The Examiner's objection and rejections are respectfully traversed.

III. Applicants' Reply to The Objection

The drawings are objected to under 37 C.F.R. § 1.83(a) for failing to show every feature of the invention specified in the claims.

The Examiner contends that the feature "at least some of the transistors are included in the multiplexer" specified in claim 11 is not shown in the drawings. Applicants have amended FIG. 3 to show one embodiment of the invention in which at least some transistors are included in a multiplexer.

The Examiner contends that the feature "the additional transistors have higher threshold voltages than the plurality of transistors" specified in claim 15 is not shown in the drawings. Applicants have amended FIG. 1 to show transistor 33 that has a higher threshold voltage than transistor 32. Applicants have also amended the specification to reflect the amendments to FIG. 1.

In view of the amendments to the specification and drawings, this objection should be withdrawn.

IV. Applicants' Reply to the 35 U.S.C. § 103 Rejections

A. Sansbury in view of Rose

Claims 1-5, 8-10, 12-14, 16, 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being obvious from Sansbury in view of Rose. This rejection is respectfully traversed.

1. Independent claims 1 and 16

Applicants' invention, as defined by independent claims 1 and 16, is directed towards a digital logic circuit and a digital processing system having at least one pass transistor coupled between two regions of logic, and control circuitry that selectively turns the pass transistor on or off by respectively applying a power supply voltage or a reverse-bias voltage to the gate of the pass transistor.

Sansbury discusses a programmable logic device containing a pass transistor and programmable memory cell facilitating the programmable coupling of intersecting interconnect conductors.

Rose discusses memory storage cells that have reduced charge leakage. In particular, when the storage cell is not being accessed, a word line driver reverse-biases a pass transistor into a non-conducting state.

Applicants submit that Sansbury and Rose, either taken alone or in combination, fail to show or suggest a pass

transistor that prevents digital signals from a first region of logic from passing to a second region of logic by applying a reverse-bias voltage to the gate terminal, as required by independent claims 1 and 16. The Examiner contends that pass transistor 410 discussed in Sansbury may be replaced with pass transistor 22 discussed in Rose. Contrary to the Examiner's contention, applicants submit that pass transistor 410 discussed in Sansbury is different from pass transistor 22 discussed in Rose. In Sansbury, memory cell 400 controls pass transistor 410 to programmably connect intersections of conductors. In Rose, pass transistor 22 is controlled to provide read or write access to storage cell 26. At best, if pass transistor 22 of Rose were used in Sansbury, it would be used to provide write access to memory cell 400 and to minimize leakage current from memory cell 400. Therefore, because pass transistor 410 of Sansbury is used differently than pass transistor 22 of Rose, pass transistor 410 cannot simply be replaced with pass transistor 22.

For at least this reason, independent claims 1 and 16 are allowable. Claims 2-5, 8, 18, 20, and 21 which depend from one of independent claims 1 and 16, are allowable at least because they depend from allowable claims. The rejection of these claims should therefore be withdrawn.

2. Independent claim 9

Applicants' invention, as defined by amended independent claim 9, is directed towards an integrated circuit containing control circuits, each control circuit containing memory elements that selectively apply to the gate terminal of a transistor either a voltage supply signal or a reverse-bias voltage.

Applicants submit that Sansbury and Rose, either taken alone or in combination, fail to show or suggest a control circuit having a memory element that selectively applies to the gate terminal of a transistor either a voltage supply signal or a reverse-bias voltage, as required by independent claim 9. In particular, Sansbury fails to show or suggest selectively applying a voltage supply signal or a reverse-bias voltage to the gate terminal of a transistor. Rose fails to show or suggest a control circuit having a memory cell.

For at least this reason, independent claim 9 is allowable. Claims 10 and 12-14 which depend from independent claim 9, are allowable at least because they depend from an allowable claim. The rejection of these claims should therefore be withdrawn.

B. Sansbury and Rose in further view of Lee

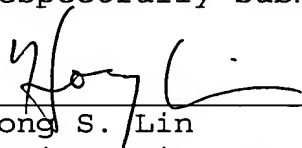
Claims 6, 7, 17, and 19 are rejected under 35 U.S.C. 103(a) as being obvious from Sansbury in view of Rose and further in view of Lee.

Applicants have shown independent claims 1 and 16 to be allowable. Claims 6, 7, 17, and 19, which depend from either independent claim 1 or 16, are allowable at least because they depend from allowable claims. The rejection of these claims should therefore be withdrawn.

V. Conclusion

In view of the foregoing, claims 1-21 are in condition for allowance. This application is therefore in condition for allowance. Reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,



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Appendix A - Annotated Marked-up Drawings

Please find attached herewith annotated marked-up drawing sheets corresponding to drawing sheets 1 and 3.

Amendments to the Drawings

Please approve the following amendments to FIG. 1 as indicated in red in the attached copies of the formal drawing for FIG. 1:

Add transistor 33.

Add text -- V_{TH}' --, -- V_{TH} --, -- $V_{TH} > V_{TH}'$ --,
and -- V_{CC} or V_{SS} --.

Add reference numerals --33--, --34--, --36--,
and --38--.

Please approve the following amendments to FIG. 3 as indicated in red in the attached copies of the formal drawing for FIG. 3:

Replace multiplexer 44 with amended version of multiplexer 44.

Add reference numeral 32.

Replacement sheets 1 and 3 are attached herewith for use as formal drawings.

Annotated sheets 1 and 3 are attached herewith in "Appendix A - Annotated Marked-up Drawings" to show the changes to the original sheets 1 and 3.

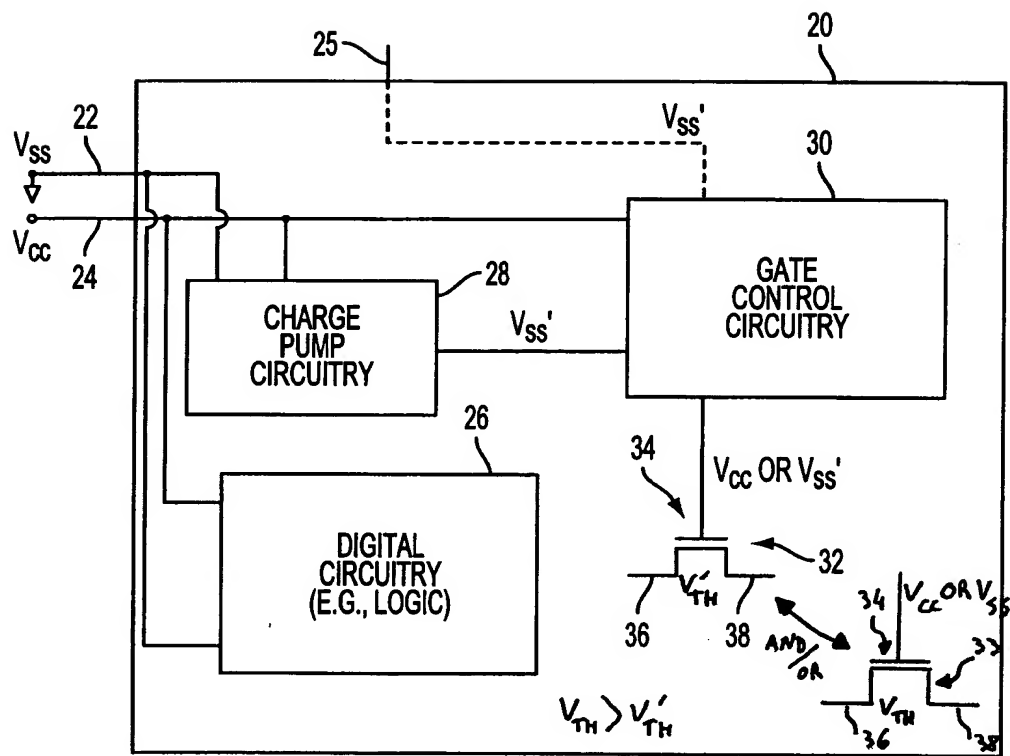


FIG. 1

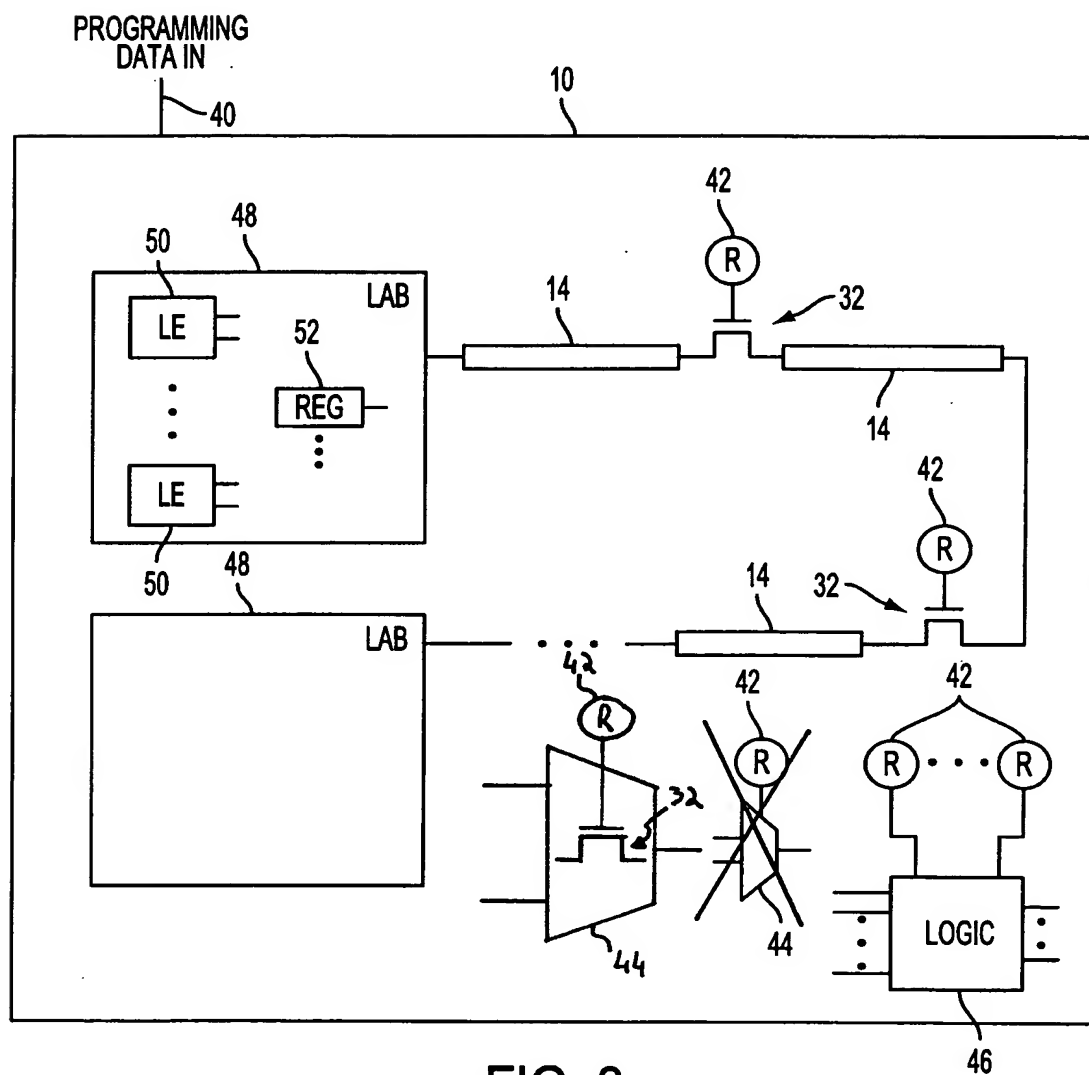


FIG. 3